DOCUMENT RESUME

ED 171 219 **HE 011 303**

AUTHOR	Potter, Earl L.
TITLE	Using Audio-Visuals: A Practical Guide for IDEA Users.
INSTITUTION	Kansas State Univ., Manhattan. Center for Faculty Evaluation and Development in Higher Education.
SPONS AGENCY	Kellogg Foundation, Battle Creek, Mich.
PUB DATE	78
NOTE	17p.
AVAILABLE FROM	Center for Faculty Evaluation and Development in Higher Education, Kansas State University, 1627 Anderson Ave., Box 3000, Manhattan, KS 66502
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Audiotape Recordings; Audiovisual Aids; *Audiovisual Instruction; College Faculty; *College Instruction; Effective Teaching; Higher Education; *Instructional Improvement; *Instructional Media; *Media Selection; Resource Guides; Student Motivation; *Teaching Methods; Teaching Skills; Videotape Recordings

ABSTRACT

This guide is concerned with how to use audiovisuals to strengthen the instructor's teaching procedures. The following topics are addressed: concepts and functions of audiovisual materials usage, how to avoid dry and dull presentations, summarizing instruction using audiovisuals, getting to the point using audiovisuals, and relating course materials to real life situations using audiovisuals. The following functions of audiovisual technology are discussed to illustrate how audiovisual technology can be implemented to improve teaching: overcome physical limitations, stimulate interest, establish cues for learning, elicit student response, direct student response, provide a common point of reference, provide meaningful information, relate abstracts to concrete objects, extend human experience, stimulate problem solving, and provide diagnostic and remedial tools. The use of video or audio tapes, conference telephone, and games and simulations are discussed. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED171219

USING AUDIO-VISUALS

A Practical Guide for IDEA Users

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Center for Faculty Eval & Dev in H.E.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Earl L. Potter
Memphis State University

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 011 303

Center for Faculty Evaluation and Development
in Higher Education
Kansas State University
1627 Anderson Avenue, Box 3000
Manhattan, Kansas 66502

Copyright © Center for Faculty Evaluation and Development in Higher Education, 1978

The Center is supported in part by a grant from the W. K. Kellogg Foundation of Battle Creek, Michigan.

Permission is hereby granted to reproduce single copies of this Guide for non-profit, instructional use.

Multiple copies may be reproduced by institutions using the Center's IDEA system for non-profit, instructional use within that institution

Other individuals or institutions wishing to reproduce multiple copies for non-profit, instructional use should obtain written permission from the Center.

Introduction to Practical Guides

A major flaw with most student evaluations of teaching, or any evaluation of teaching, is that having pointed out where there might be room for improvement, they have little to offer about possible means of improvement. These Practical Guides are an attempt to remedy that situation for IDEA users. Typically, the IDEA Report identifies specific teaching methods needing improvement which are related to the instructor's course objectives where the students reported average progress or less. These Practical Guides will make concrete suggestions about ways to improve teaching. Although the suggestions presented in these Guides are written in the context of the IDEA System, most of the suggestions are taken from the general literature on college teaching and so should be of help to any college teacher seeking to improve upon a given teaching technique.

The first set of Practical Guides published by the Center were written by the professional staff of the Center; Drs. Stephen Brock, William Cashin and Richard Owens. While individuals from Kansas State University may author subsequent Guides, the Center has invited professionals in instructional improvement from other colleges and universities to contribute manuscripts.

The Center Staff is pleased to publish Using Audio-Visuals: A Practical Guide for IDEA Users by Dr. Earl Potter.

Dr. Potter is currently the Director of the Learning Media Center and a staff member of the Center for Instructional Service and Research at Memphis State University. His teaching experience encompasses high school, junior college and university instruction. He is a frequent lecturer on the subject of the use of audio-visual aids in teaching. He has been the featured speaker at conferences on educational technology in nursing education and business education.

Stephen C. Brock
William E. Cashin

Fall 1978

CONTENTS

I. Concepts and Functions of Audio-Visual Material Usage 1

II. How To Avoid Dry and Dull Presentations 4

A. Consider the possible impact of A-V materials 4
B. Use unique materials if possible 5
C. Select materials which fit your instructional objectives 5
D. Stimulate interest and direct learning 5
E. Establish cues for learning 6
F. Direct student responses 6

III. Summarizing Instruction Using Audio Visuals 6

IV. Getting To the Point Using Audio-Visuals 7

A. Audio-visuals and pacing 7
B. Problem solving 7
C. Relating abstract concepts to concrete objects 8

V. Relating Course Material To Real Life Situations Using Audio-Visuals 9

A. Use video or audio tapes 9
B. Use conference telephone 10
C. Use games and simulations 10

VI. Concluding Remarks 10

USING AUDIO-VISUALS

A Practical Guide for IDEA Users

This guide is concerned with the topic of how to use audio-visuals to strengthen the instructor's teaching procedures, expecially related to the following items from the IDEA Survey Form.

9. Made presentations which were dry and dull.

14. Summarized material in a manner which aided retention.

17. Explained course material clearly, and explanations were to the point.

18. Related course material to real life situations.

This guide will make suggestions regarding audio-visual techniques that are appropriately used with current methods of instruction, such as lectures, discussion groups, team teaching, and the like.

The guide is divided into six parts as suggested by the functions of audio-visual materials and the IDEA Survey Form items.

I. Concepts and Functions of Audio-Visual Materials Usage

II. How to Avoid Dry and Dull Presentations, Item 9.

III. Summarizing Instruction Using Audio-Visuals, Item 14.

IV. Getting to the Point Using Audio-Visuals, Item 17.

V. Relating Course Materials to Real Life Situations Using Audio-Visuals, Item 18.

VI. Concluding Remarks

I. Concepts and Functions of Audio-Visual Materials Usage

Two suggestions are in order which will give general guidance to the user of audio-visual materials. The proper use of audio-visual materials should be centered on the study of instructional methods. Secondly, any use of A-V materials should be based upon the behavioral sciences to insure desired educational outcomes. This does not imply that the instructor should immediately take up the study of behaviorism, that the students should be required to understand certain concepts, or to change their behavior in educationally desirable ways. It does mean that students should not be passive. The instructor should have no doubts as to whether students understood materials.

One of the underlying precepts of using A-V aids is that of organization and an orderly flow of information. Audio-visuals by their very nature provide a framework within which an organized effort in teaching is not only possible but easily managed. Most instruction contains information which is important; however, it if is not presented effectively, the end result may be confused or ill-informed students.

For example, many instructors use transparencies not only to provide information to the students, but also to cue the instructor. The topics and information on the transparency, slide, or other audio-visual provide instructional material with which the instructor may explain or further enlarge upon. Instructors also frequently mark slides and transparencies with inconspicious code marks which indicate the information coming on the next slide. As a result, they need not interrupt their teaching, refer to their notes as often, nor break the train of thought as otherwise would be the case.

If instructors handle problems associated with ordering their instruction, they may then focus their attention on other methods problems such as the need for continuity and logic. Failure in the latter two areas will surely result in teaching which features disjointed bits of information and explanations which are not clear. Audio-visuals may in fact help direct an instructor's thinking and help limit classroom effort to the essentials of instruction. If instructors concentrate their thinking on these aspects of the preparation, then their efforts should be better focused and more meaningful to students.

One example emphasizing both behavioral aspects and instructional methodology is the use of computer assisted instruction. A number of schools make use of the computer in instruction for large groups of students. One program entitled TIPS (Teaching Information Processing Systems) designed by Allen C. Kelley nearly ten years ago keeps records and provides quick feedback to students and instructors in terms of achievement on multiple choice surveys. Personalized computer printouts provide a summary of student performance in tabular form -- student response, correct responses, and total number of correct responses. Following this scoring analysis, "learning prescriptions" are printed, each of which corresponds to particular incorrect responses. This process allows the professor to provide more individual attention to students based on their weaknesses. Additionally, the computer printout directs students via "learning prescriptions" to engage in an activity to correct the weakness. These "learning prescriptions" are completely controlled by the instructor, and what the student must do to correct the weakness varies with the instructor. Typically, however, the prescription generally emphasizes work which will lead to the desired response or directs the the student to some other alternative, the end result is to focus the student's thinking on the correct process or response. Using A-V materials will elicit a response, and it should be directed toward the objectives of the instruction. Thus, students are required to do something, to understand something, or to solve something. The use of audio-visuals should not elicit a merely passive response on the part of the students.

Instructors should consider the functions for which audio-visuals can be used. Erickson and Curl (1972) enumerate several of these functions in Fundamentals of Teaching with Audio-Visuals. A more complete list is provided here. They are:

1. Overcome physical limitations (e.g., class size and time limitations);
2. Stimulate interest (attemptto get students to want to learn);
3. Establish cues for learning (guideposts to direct learning);
4. Elicit student response (ask for it directly);
5. Direct student response (make sure educational outcomes are desired ones);
6. Provide a common point of reference (all students are tuned to the same thing);
7. Provide meaningful information (teaching should make a point);
8. Relate abstract to concrete objects (cannot learn what is not understood);
9. Extend human experience (teach knowledge);
10. Stimulate problem solving (help students to want to know answers);
11. Provide diagnostic and remedial tools (know what students can do and provide help when they have difficulty learning).

Erickson and Curl further point out that in using audio-visual materials each of these functions may not be met, or the materials may not necessarily achieve every one of the functions. In certain instances, the audio-visual materials may function in more than one role. The instructor should be aware of the various possible functions and actively attempt to select audio-visual materials which will blend message and medium. In commenting upon sections II-V, reference will be made to the functions enumerated in this section and how they may apply in strengthening the instructor's teaching.

Although it is not the primary purpose of this paper to comment on audio-visual software, a few explanatory comments may be helpful. As a general rule, the more sophisticated the materials, the more instructional returns a teacher should expect, but it is also true that generally the more sophisticated the materials, the more complex and expensive the process to get them. In the long run, success with audio-visuals does not

necessarily demand exotic materials such as computer-based instruction or even studio-produced instructional video tape. Instructor-made materials and associated equipment are usually sufficient and well within the financial means of most institutions.

In discussing the kinds of audio-visual aids, a hierarchical arrangement is suggested which goes from less difficult materials to materials which are more difficult to develop and use.

LESS DIFFICULT	pictures (photographs, posters, etc.)
	overhead transparencies
	audio tapes
	filmstrips
	slides
	non-print with sound (filmstrips or slides with audio cassettes)
	video
	16mm
	super 8
	CAI (computer assisted instruction)
	or
MORE DIFFICULT	CMI (computer managed instruction)

The transparency may be the most adaptable and versatile of all audio-visual materials. There are several reasons for this estimate. Transparencies are inexpensive even if purchased from production companies. They are easily adapted, updated, and otherwise changed to reflect current information or various organizational designs needed by the instructor. For instructors who like fast-paced, simple visuals, or who like to make their own materials with the least inconvience, the transparency ranks high. As one adds more variables to the audio-visual, for example, sound with slides, the complexity and man-hours needed to produce satisfactory materials increases. As one progresses on the continuum, the complexity increases. With computer based education, not only are special skills required but also technicians and special equipment. There is the need to adequately assess both the requirements of instruction and the resources which will also be needed. In many instances, the less glamorous audio-visual materials are just as successful as the more sophisticated materials and require less effort. With these comments in mind, the paper will now focus upon a variety of materials and the setting in which they may be used most effectively.

II. HOW TO AVOID DRY AND DULL PRESENTATIONS (IDEA Item 9)

A. Consider the possible impact of your A-V materials. Assuming that the physical limitations of equipment and graphic problems have been overcome and that the information is correct, what strategy might an instructor employ to make presentations more effective using A-V materials? One of the most important ideas to remember in the use of audio-visuals is the impact of the materials. Decide what impact that item may have for the students. Will it elicit an emotional response, suggest something new,

explain, give information, raise a question, etc.? Use audio-visuals to present information which students might not otherwise experience. Ultimately, the instructor wants the student to get as close to a first-hand experience as is possible in an instructional environment.

To illustrate this point, the American Library Association has produced a film entitled The Speaker. The main point of the film concerns the constitutional right of free speech. The impact is argumentative in nature. The instructor, then, should capitalize upon the film's strong point, presenting various aspects of the argument for discussion. The film also attempts to present the issue as if it were a real situation. The events take place in a high school setting. The students have decided to invite a controversial speaker to an honors day program. As the program is advertised in the school and community, the resulting chain of events brings pressure upon the student group to cancel the speaker. The audience is left to decide the issue for themselves. Audio-visual materials such as a film like The Speaker create a realism in the classroom that probably is otherwise not possible.

B. Use unique materials if possible. If at all possible, choose A-V items which will be unique for the students. Although many times finding something different or unusual is not feasible, the teacher should challenge the students with the unexpected as much as possible. One instructor, frustrated with having to use the same materials each semester, attempted a different approach. Rather than show the complete film chosen for a class period, he carefully selected a portion of the film near the end and showed it to the students. From the selected portion, the instructor had the students conceive the portion of the film which they had not seen. The resulting discussion focused upon student opinions and the point of the film.

C. Select materials which fit your instructional objectives. Be cautious in using audio-visuals. These materials are only as good as the planning, thinking, and preparation which precedes their use. Do not let materials do your thinking for you. Purchased materials are designed to fit into preplanned instructional blocks, or have objectives which accompany the materials. Adapt or change these aids, if possible, to fit your teaching objectives. Usually, audio-visual materials will add to a presentation if learning objectives can be written from the material. Do not use materials unless they are worth classroom time. Ask yourself: Would the information be more effectively presented otherwise? Is there a strong possibility that attitude or behavior change will be an end result? Will the benefits from the presentation be measurable, for example, will it help to improve recall or help students remember important facts, enhance the quality of discussion, or increase the students' ability to apply information? All of these questions will need to be answered before a final decision can be made as to whether or not audio-visual materials will add to the presentation.

D. Stimulate interest and direct learning. One should be prudent in motivating students, that is, in stimulating interest. The pitfall is that the instructor will stop short and expect motivation to carry through with learning. It might and it might not. Or, it might conceivably result in

misdirected learning. It is possible to motivate students but fail to follow through with teaching. Failure to bring teaching to closure can be detrimental. Students who have been motivated to learn do not necessarily learn what should be learned simply because they have been motivated. Audio-visual materials can help the instructor stimulate interest and learning, that is, audio-visuals may establish those cues which point the student in the right direction. For example, interest may be stimulated by using audio-visuals to demonstrate phenomena usually unobservable. In the health sciences, television and the electron microscope have given students access to data heretofore difficult for students to experience first hand.

E. Establish cues for learning. On a less spectacular plane, the lowly transparency can prove to be quite effective in making presentations. They lend themselves to diagrams, charts, schematics, and are effective in giving an orderly presentation regardless of the complexity of the material. Transparencies are especially effective when instructor-developed, and the instructor additionally is able to pay particular attention to providing the direction or cues for what would be learned.

One important caution should be observed. Avoid reading information directly from the audio-visual which students can read for themselves. Rather, the instructor should concentrate on explanation and details which relate to the concepts the audio-visual is illustrating.

F. Direct students' responses. Many times students do not interpret information in the same way the instructor does. A transparency, for example, can become a constant and unchanging cue or stimulus to which the instructor can repeatedly refer. Not only does the transparency become a common point of reference, but the instructor is able to elicit and direct the information students need.

III. SUMMARIZING INSTRUCTION USING AUDIO-VISUALS (IDEA Item 14)

One of the more important aspects of instruction is the summary. A summary provides guidance to the students about the most important concepts as opposed to lesser information. In addition, summaries provide a setting for additional information, outside work, or future instruction. Because audio-visuals provide a common point of reference and direct the students' attention and response, they are well suited to providing a summary of what is supposed to be learned.

Audio-visual materials provide the student with easily understood, factual, and manageable information. One of the marks of audio-visual materials is implicity, a one-to-one communication. Audio-visuals also provide an effective means of condensing information. All of these are especially useful in compiling a summary.

For example, referring to the experiences of other instructors, it has been suggested that video taping is excellent for summary and evaluation. In business management courses, instructors have video taped instructional sessions demonstrating interview skills. After the simulated sessions were over, the class would meet in small groups to

view a summary of their activity. This practice lets the students see themselves and gives the instructor the advantage of being able to critique and reinforce those who are correctly responding and further respond to those in need of special help. The end result should provide meaningful information to the student about improvement and should reinforce desirable student techniques. This session not only allowed the instructor to make sure the student understood specific suggestions for improvement, but also allowed the student to respond to specifics that would otherwise be unobserved. For the participants, the video tape provided a common point of reference. Each student benefited from the individualized aspect, and the group benefited from the consensus of knowing what the session presented on a larger scale.

Other examples are available. Many times instructors prefer to lecture without using audio-visual aids. These instructors miss the opportunity for a good change in pace as well as an effective summation which can be obtained by presenting carefully choosen essential points on a transparency. If students failed to understand the information or missed the cue during the lecture, using transparencies provides an excellent opportunity to focus the entire group's attention on carefully selected information. The end result may be a more knowledgeable student.

IV. GETTING TO THE POINT USING AUDIO-VISUALS (IDEA Item 17)

A. Audio-visuals aid pacing. All too often instructors embellish presentations beyond an effective point. Many professors stray from their topic. As a result, valuable class time is lost and students may become confused. Unfortunately, instructors sometimes try to make up for lost time by rapidly covering great amounts of information as the class progresses. Much of the time this reaction results in the loss of teaching opportunities, for example, discussion time. The use of audio-visuals may alleviate the problem. They are generally simple and to the point, and if the professor chooses to go off on a tangent, the audio-visual materials at least will focus the students' attention on the topic.

B. Problem solving. One potential outcome which might be realized from the use of audio-visuals concerns problem-solving. Instruction should be focused whenever possible on real life problems and their solutions. Problems may be solved by various approaches, scientific or otherwise. Questions pertaining to the who, what, where, when, how, and why of problem situations must be answered. Audio-visuals provide a meaningful way to communicate the answers. Again, drawing upon the experiences of actual teaching situations, consider the following example. Instructors in a library sciences course which intended to teach students how to read appropriate literature to children sought unsuccessfully for some time to make their teaching interesting and realistic. They finally turned to video tape. Each student teacher or group of student teachers composed a script and made a presentation under conditions which simulated an actual library setting. Using the institution's instructional television facilities, the students played their roles of presenting children's literature before television cameras. These tapes then were used to give students criticism and

direction. They also provided the students several interesting examples of different presentations as conceived by their peers. In this instance, the use of audio-visual materials provided a solution to two problems: (1) how to make the presentations appear more interesting and realistic to the students, and (2) how to let students see a wide variety of possible approaches in presenting children's literature. In addition, the taping provided a first-hand experience in a directed learning environment. The end result helped clarify their course materials and demonstrated to students who would be future teachers the difficulties of focusing classroom materials.

C. Relating abstract concepts to concrete objects. Another possible use of audio-visual materials is to relate abstract concepts to concrete objects. More verbal explanations of complex phenomena are difficult for students to understand and may be impossible to give in some circumstances. This is one area in which audio-visuals excel and one can use almost any format available from filmstrips to video tape. Consider the verbal explanation of the functions of the inner ear as compared with actually seeing the phenomena in action via film or videotape. Consider verbally describing the testing of tensile strength of various materials as compared to showing the same test on slow motion 16mm film. Consider the verbal explanation of how to hit a tennis ball or how to properly perform a ballet step as compared to a critique using videotape replay. Consider a verbal explanation of a Shakespearean soliloquy as compared to a stage performance via 16mm film, video tape, or live.

One literature instructor, frustrated because he could not inspire his students with verbal explanations relating the experiences of various contemporary writers, decided to implement a rather innovative approach using audio-visual materials. His idea was simple. If the students could not go to the expert, bring the expert to the students. Many would reply "impossible except for a fortunate few institutions". This conclusion is only partly true. The instructor in this case made use of a device called a conference telephone, a device widely used in the business world. He prearranged a long distance phone call to one of his literary friends, and by means of a conference phone, the students asked questions and were answered directly by the writer. (The conference telephone is a simple device in which a regular telephone has been altered in order for the instructor and the students to speak over a microphone and to hear both themselves and the other party, via a public address system.)

Consider courses which use only a textbook to teach double entry bookkeeping, shorthand, or statistics. The lowly transparency becomes an effective means of concretely presenting otherwise abstract or complex materials. Other audio-visuals are effective in bridging the gap between confusion and understanding. In one instance at the university level, a mathematics department instructor was encountering students who were not able to handle the mathematics text. The instructor decided to use an audio tutorial program (audio tape presenting information in a conversational manner) to provide assistance to the students in using the textbook. In evaluating this approach later, the mathematics instructor noticed a trend. At the beginning of a particular course, the students would use the tapes with the mathematics text. By mid-term, almost one half of the students would stop using the tapes; however, the grade average for most students

showed no real improvement compared with students having no difficulty. By the end of the course, over 98% of the students having difficulty had stopped using the tapes, and the grades were still the same as at the mid-term check, i.e., there appeared to be little change or improvement. It was at first concluded that the tapes might not be helpful, or at best the tapes were probably helping the student to avoid getting further behind. However, after the students using this approach had taken a few more mathematics courses, it was apparent that their grades were showing improvement, and they were no longer having difficulty reading the text-books. Although there was no hard evidence to fully support the conclusion, it appeared that the audio tutorial program helped the students learn to read and use mathematics texts, and the results showed up as improvement in later course grades. This was one instructor's way of relating a complex problem to a reasonable solution, that is, relating material which was abstract, at least for the students, to a concrete object, in this case information in the form of an audio tape which students could easily understand.

V. RELATING COURSE MATERIALS TO REAL LIFE SITUATIONS USING AUDIO-VISUALS (IDEA Item 18)

One of the intangibles of education is to give a realistic direction to in-class instruction. In many instances it is difficult to capture the essence of real life situations and yet maintain the atmosphere suitable for instruction. Audio-visuals have the properties to extend the instructor and encompass realistic situations.

One goal of instruction is to simulate real life experiences and yet still provide the possibility for directed learning. If, for some reason, it is not feasible to take the student to the situation, bring the situation to the student. The use of audio-visuals may be the most prudent alternative in that audio-visuals may be as close to the real situation as is possible. There are instances where the real thing may not be the most effective for learning due to a variety of constraints, class size for example, dangerous situations, distance, etc. In the final analysis, coping with real life situations is what education is all about and provides insights into problems and solutions which cannot be fully appreciated otherwise. However, the next best alternative may be the use of audio-visuals.

This section will comment upon the function of extending the human experience using audio-visual aids. Very possibly no other single instructional aid serves this function as well as do audio-visuals. They have the potential to condense time, capture the essence of real life, relate important information, and produce the content at any time on demand.

A. Use video or audio tapes. For instance, it has been mentioned in one of the preceding sections that detailing interview skills using video tape as both a teaching and evaluative tool is very effective. Video taping on-site case studies for teaching areas such as social welfare, nursing, and the like are also very effective. The use of slides and video as a laboratory tool is almost indispensable for the

sciences and medical training areas. When an expert cannot be brought to the classroom, either an audio or video tape may well serve the same purpose.

Using examples from actual teaching situations, video tape came to the rescue of the law school program at one school. Each time the block of instruction for court room and trial procedures was taught, the students would have to gather bag and baggage and travel to the local federal building or municipal court. A courtroom demonstrates real life situations but is hardly an appropriate classroom for instruction on a regular basis. As a result of the problem, several law professors with the help of the institution's instructional television studio, designed and produced a set of video tapes detailing the types of courtroom circumstances in which they were interested. To add realism, the actual courtroom was pressed into service along with local practicing attorneys and sitting judges. The participants, jury and the like, were from the institution's speech and drama department. The end result of a year's work was a highly successful and realistic series of thirteen hours of video tape demonstrating court and trial procedures. In this case, the real situation was not appropriate for teaching purposes, but video presentations of selected procedures were appropriate. The reality of the real life situation was preserved

B. Use conference telephone. Another effective means of bringing experts into the classroom is the use of the conference telephone in which the students listen as well as ask questions via long distance telephone.

C. Use games or simulations. Game simulation can also be an effective audio-visual aid. Many instructors use the computer to manage involved or complex simulations. There are simulations appropriate for many courses from city planning in political science to computer managed "business encounters". For instance, one game in business management uses the computer to referee a simulation in which students learn the intricacies of managing talent in the music industry. The students make decisions based upon financial information given by the computer. The students then make management decisions and use the computer to determine profit, losses, and the like. The computer then provides new market information and the strategy continues.

VI. CONCLUDING REMARKS

This paper has attempted to offer practical suggestions for using audio-visual aids to improve general teaching procedures. The procedures discussed were from the IDEA Survey Form:

9. Made presentations which were dry and dull;

14. Summarized material in a manner which aided retention;

17. Explained course material clearly, and explanations were to the point;

18. Related course material to real life situations.

In an effort to appropriately demonstrate the effectiveness of audio-visuals in aiding or improving teaching related to these IDEA items, eleven functions of audio-visual technology were mentioned.

1. Overcome physical limitations.
2. Stimulate interest.
3. Establish cues for learning.
4. Elicit student response.
5. Direct student response.
6. Provide a common point of reference.
7. Provide meaningful information.
8. Relate abstracts to concrete objects.
9. Extend human experience.
10. Stimulate problem solving.
11. Provide diagnostic and remedial tools.

These functions were applied and examples given to show how audio-visual technology can be implemented to improve teaching. Although the paper attempted to select certain functions and apply these to the specific IDEA items, it is readily apparent that many of the functions would apply to more than one or all of the IDEA items, and where appropriate they should be applied to more than one of the IDEA items.

This paper in no way should be taken to imply that other aids such as the textbook or other documentary materials are less important. The horizons of education are becoming broader with passing time, and the scope of teaching is also broader. This paper simply emphasized that, for certain objectives, audio-visual aids can enhance classroom communication and thereby strengthen teaching.

Finally, it should be stated that audio-visuals have a learning impact, and to direct and control this impact is a main concern of any instructor interested in using audio-visuals as a tool in education. The use of audio-visuals cannot be haphazard if student learning is to result from them. Reasons for ineffective use of audio-visuals are numerous, but the fact that a particular audio-visual falls flat is not necessarily a problem with the audio-visual's appropriateness. These materials are not a substitute for education. An audio-visual will not carry the teaching obligation to fulfillment; this rests with the instructor.

FURTHER READING

Brown, J. W., Norberg, K. D., & Srygley, S. K. Administering Educational Media. New York: McGraw-Hill, 1972.

Brown, J. W., Lewis, R. B., & Harcleroad, F. F. AV Instruction: Materials and Methods. New York: McGraw-Hill, 1969.

Erickson, C. W. H., & Curl, D. Fundamentals of Teaching With Audiovisual Technology. New York: MacMillan Company, 1972.

Minor, E. O. Simplified Techniques for Preparing Visual Instructional Media. New York: McGraw-Hill, 1962.

Tindall, K., Collins, B., & Reid, D. The Electric Classroom. New York: McGraw-Hill, 1973.

Unwin, D. Media and Methods. New York: McGraw-Hill, 1969.